COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
VALLEY REGIONAL OFFICE
P.O. Box 3000, Harrisonburg, Virginia 22801
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Located at 4411 Early Road, Harrisonburg, VA
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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

Amy Thatcher Owens
Regional Director

May 18, 2018

Mr. Marc Humphreys
Director of Operations
H. P. Hood, LLC
160 Hood Way
Winchester, Virginia 22602
marcus.humphreys@hphood.com

Location: Frederick County
Registration No.: 81359

Dear Mr. Humphreys:

Attached is a permit to operate your fluid milk manufacturing facility pursuant to 9VAC5 Chapter 80 Article 1 of the Virginia Regulations for the Control and Abatement of Air Pollution. The permit incorporates provisions from the permits dated March 28, 2017 and September 21, 2017. The attached permit will be in effect beginning June 1, 2018.

In the course of evaluating the application and arriving at a final decision to issue this permit, the Department of Environmental Quality (DEQ) deemed the application complete on December 18, 2017 and solicited written public comments by placing a newspaper advertisement in the Winchester Star on March 1, 2018. The 30-day required comment period, provided for in 9VAC5-80-270, expired on April 2, 2018.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and/or civil charges. Please read all permit conditions carefully.

This permit approval to operate shall not relieve H. P. Hood, LLC of the responsibility to comply with all other local, state, and federal permit regulations.

To review any federal rules referenced in the attached permit, please refer to the website on which the US Government Publishing Office maintains the text of these rules: **www.ecfr.gov**, Title 40, Part 70.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a

petition with the Board within 30 days after this case decision notice was mailed or delivered to you. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact me at (540) 574-7817 or Janardan.Pandey@deq.virginia.gov.

Sincerely,

Janardan R. Pandey, P.E.
Air Permit Manager

Attachment: Permit

cc: File DEQ-VRO
Director, OAPP (via email)
Chief, Air Enforcement Branch (3AP20), U.S. EPA, Region III (via email)
Anthony Campbell, Environmental Specialist, H. P. Hood, LLC (via email)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Federal Operating Permit
Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300, of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	H.P. Hood, LLC
Facility Name:	H.P. Hood, LLC
Facility Location:	160 Hood Way Winchester, Virginia
Registration Number:	81359
Permit Number:	VRO81359

This permit includes the following programs:

Federally Enforceable Requirements - Clean Air Act (Pages 4 through 33)
State Only Enforceable Requirements (Page 33)

June 1, 2018
Effective Date

May 31, 2023
Expiration Date

Deputy Regional Director

May 18, 2018
Signature Date

Permit consists of 34 pages
Permit Conditions, 27 pages
Table of Contents, 1 page
Attachments A & B

Table of Contents

Facility Information

Permittee Information
HP Hood LLC
160 Hood Way
Winchester, Virginia 22602

Responsible Official
Marc Humphreys
Director of Operations

County-Plant Identification Number: 51-169-81359

Facility Description: NAICS 311511 (Fluid Milk Manufacturing) - The H. P. Hood, LLC (Hood) facility produces Ultra High Temperature (UHT) dairy products typically with an extended shelf life. Emission units at the facility are located in the Cogeneration Plant, Boiler Plant, Ultra-Pasteurization Process and Wastewater Pre-Treatment Plant. There are numerous insignificant activities that are used to support the ultra-pasteurization of milk products.

To support the dairy production process, a 15 MW natural gas-fired combustion turbine is used to generate electricity for use at the plant or for sale on the electrical grid. Waste heat from the combustion turbine is passed through two heat recovery steam generators (HRSGs). The HRSGs can also fire natural gas at a maximum design heat input capacity of 44.2 MMBtu/hr; however, the HRSGs cannot simultaneously utilize natural gas and waste heat. Steam generated by the HRSGs is used for the ultra-pasteurizaton of milk products. There are four additional boilers in the Boiler Plant that also generate steam for the ultra-pasteurization of milk products.

The steam injected into the process is collected in a vacuum chamber. Gases from the vacuum chamber are condensed and collected in the Ultra-Pasteurization Process area, referred to as PR1. The condensed liquid largely consists of water with residual ethanol and milk solids from the finished product processing.

Waste from milk processing is pumped through an influent flow equalization tank and then split into two anaerobic digesters. The anaerobic digesters discharge in batches to a sequential batch reactor which decants in batches to the effluent flow equalization tank. Digester gas, consisting primarily of methane, from each anaerobic digester, is oxidized by one of two flares.

Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
CT1		Solar Titan 130 15-MW Gas Combustion Turbine	172.3 MMBtu/hr (based on HHV) 157 MMBtu/hr (based on LHV)				9/21/2017
HRSG 1		Hurst Series 250 Boiler (Natural Gas)	44.2 MMBtu/hr				9/21/2017
HRSG 2		Hurst Series 250 Boiler (Natural Gas)	44.2 MMBtu/hr				9/21/2017
B1		Superior Boiler Works Model 6-5-4000 (Natural Gas)	37.66 MMBtu/hr				N/A
B2		Superior Boiler Works Model 6-5-4000 (Natural Gas)	37.66 MMBtu/hr				N/A

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
B3		Superior Boiler Works Model 6-5-4000 (Natural Gas)	37.66 MMBtu/hr				N/A
B4		Superior Boiler Works Model 6-5-4000 (Natural Gas)	37.66 MMBtu/hr				N/A
EG1		Kohler Emergency Generator (Natural Gas)	135 kW				N/A
BB1		BVF2 Biogas Flare	5.4 MMBtu/hr				N/A
BB2		BVF1 Biogas Flare	10.2 MMBtu/hr				9/21/2017
Processing Equipment							
PR1		Processing Area (ESL Milk Products)					3/28/2017

*The Size/Rated capacity is provided for informational purposes only and is not an applicable requirement.

Fuel Burning Equipment Requirements - (CT1, HRSG1 – HRSG2, B1 – B4, BB1 – BB2)

Note: In Conditions designated "RICE MACT" or "NSPS KKKK", the word "you" refers to the permittee.

1. **Limitations - Emission Controls (CT1)** – Nitrogen Oxide (NO_x) emissions from the combustion turbine shall be controlled by dry low-NO_x (SoLoNOx) combustion control technology. The combustion turbine shall be provided with adequate access for inspection. The SoLoNOx technology shall be in operation when the combustion turbine is in normal operating mode (above 0 °F and greater than 50% load).
   (9 VAC 5-80-110 and Condition 1 of 9/21/2017 Permit)

2. **Limitations - Emission Controls (HRSG1, HRSG2)** – Nitrogen Oxide (NO_x) emissions from the heat recovery steam generators shall be controlled by low-NO_x burners. The heat recovery steam generators shall be provided with adequate access for inspection. The low-NO_x burners shall be in operation when the heat recovery steam generators are operating independently of the combustion turbine.
   (9 VAC 5-80-110 and Condition 2 of 9/21/2017 Permit)

3. **Limitations – Emission Controls (CT1, HRSG1, HRSG2)** – PM-10 and PM-2.5 emissions from the combustion turbine and heat recovery steam generators shall be controlled through the use of natural gas.
   (9 VAC 5-80-110 and Condition 3 of 9/21/2017 Permit)

4. **Limitations - Emission Controls (CT1, HRSG1, HRSG2)** – Carbon Monoxide (CO) and Volatile Organic Compound (VOC) emissions from the combustion turbine and heat recovery steam generators shall be controlled by the use of good combustion practices and proper operation and maintenance in accordance with the manufacturer's operating instructions, at a minimum.
   (9 VAC 5-80-110 and Condition 4 of 9/21/2017 Permit)

5. **Limitations - Emission Controls (BB2)** – NOx, CO, PM-10, PM-2.5, and VOC emissions from the digester gas flare BB2 shall be controlled by the use of good combustion practices and proper operation and maintenance in accordance with the manufacturer's operating instructions, at a minimum.
   (9 VAC 5-80-110 and Condition 5 of 9/21/2017 Permit)

6. **Limitations - Emission Controls (CT1, HRSG 1, HRSG 2, BB2)** – Sulfur Dioxide (SO_2) emissions from the combustion turbine, heat recovery steam generators and digester gas flare BB2 shall be controlled by the use of low-sulfur fuel as specified in Conditions 7 and 8.
   (9 VAC 5-80-110 and Condition 6 of 9/21/2017 Permit)

7. **Limitations – Fuel (CT1, HRSG1, HRSG2, B1 – B4)** – The approved fuel for the combustion turbine, heat recovery steam generators and boilers is natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 7 of 9/21/2017 Permit)

8. **Limitations - Fuel (BB2)** – The approved fuel for the digester gas flare BB2 is wastewater treatment digester gas. Natural gas may be used as a fuel to ignite the pilot flame. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 8 of 9/21/2017 Permit)

9. **Limitations - Fuel Specifications (CT1, HRSG1, HRSG2)** – The natural gas used in the combustion turbine or in either heat recovery steam generator shall have a maximum sulfur content of 2.0 grains per 100 standard cubic feet.
(9 VAC 5-80-110 and Condition 9 of 9/21/2017 Permit)

10. **Limitations - Fuel Specifications (BB2)** – Wastewater treatment digester gas shall be as collected from the HP Hood, LLC wastewater treatment plant.
(9 VAC 5-80-110 and Condition 10 of 9/21/2017 Permit)

11. **Limitations - Fuel Throughput Limit (Cogeneration System: CT1, HRSG 1, HRSG 2)** – Natural gas throughput to the cogeneration system shall not exceed 228,302 scf/hr. Compliance shall be determined based on records of hourly natural gas throughput (as specified in Condition 32.i).
(9 VAC 5-80-110 and Condition 11 of 9/21/2017 Permit)

12. **Limitations - Requirements by Reference** – Except where this permit is more restrictive, the NSPS equipment as described in the Introduction shall be operated in compliance with the requirements of 40 CFR 60, Subpart KKKK.
(9 VAC 5-80-110 and Condition 13 of 9/21/2017 Permit)

13. **Limitations - Short-term Emissions Limits (CT1)** – Emissions from the operation of the combustion turbine shall not exceed the limits specified below:

Particulate Matter (PM) (filterable)	0.33	lbs/hr
PM-10 (total)	3.16	lbs/hr
PM-2.5 (total)	3.16	lbs/hr
Sulfur Dioxide	0.98	lbs/hr
	0.0056	lbs/MMBtu
Nitrogen Oxides* (as NO2)	9.44	lbs/hr
	15.0	ppmvd @ 15% O_2

Carbon Monoxide*	9.57	lbs/hr
	25.0	ppmvd @ 15% O_2
Volatile Organic Compounds*	1.10	lbs/hr
	5.0	ppmvd @ 15% O_2

* Emission limits for NOx, CO, and VOC are applicable in Normal load (above 0°F and greater than 50% load). The emission rates for startup/shutdown periods and low temperature operating mode (< 0°F and greater than 50% load) are listed in Attachment A.

The permittee shall record the duration of each operational mode in order to calculate emissions and shall operate the facility so as to minimize the frequency and duration of startup and shutdown events. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 1, 3, 4, 7, and 25.
(9 VAC 5-80-110, 40 CFR 60.4320(a), 40 CFR 60.4330(a), Table 1 of 40 CFR 60 Subpart KKKK and Condition 14 of 9/21/2017 Permit)

14. **Limitations - Short-term Emissions Limits (HRSG 1, HRSG 2)** – Emissions from the operation of each heat recovery steam generator shall not exceed the limits specified below:

Particulate Matter (PM) (filterable)	0.08	lbs/hr
PM-10 (total)	0.32	lbs/hr
PM-2.5 (total)	0.32	lbs/hr
Nitrogen Oxides (as NO_2)	2.14	lbs/hr
	10.0	ppmvd @ 15% O_2
Carbon Monoxide	3.59	lbs/hr
Sulfur Dioxide	0.26	lbs/hr
Volatile Organic Compounds	0.24	lbs/hr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 2, 3, 4, 7 and 25.
(9 VAC 5-80-110, 40 CFR 60.4320(a), 40 CFR 60.4330(a), Table 1 of 40 CFR 60 Subpart KKKK and Condition 15 of 9/21/2017 Permit)

15. **Limitations - Annual Emissions Limits (CT1)** – Annual emissions from the combustion turbine shall not exceed the limits specified below:

Particulate Matter (PM) (filterable)	1.46	tons/yr
PM-10 (total)	13.86	tons/yr
PM-2.5 (total)	13.86	tons/yr
Sulfur Dioxide	4.31	tons/yr
Nitrogen Oxides (as NO_2)	41.48	tons/yr
Carbon Monoxide	82.16	tons/yr
Volatile Organic Compounds	5.23	tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period using the equations provided in Condition 26 and shall include operation at normal load, low temperature mode, and startup/shutdown periods, as applicable. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 1, 3, 4, 6, 7, 9, 20, 25, and 26.
(9 VAC 5-80-110 and Condition 16 of 9/21/2017 Permit)

16. **Limitations - Annual Emissions Limits (HRSG 1, HRSG 2)** – Annual combined emissions from the heat recovery steam generators shall not exceed the limits specified below:

Particulate Matter (PM) (filterable)	0.72	tons/yr
PM-10 (total)	2.84	tons/yr
PM-2.5 (total)	2.84	tons/yr
Sulfur Dioxide	2.24	tons/yr
Nitrogen Oxides (as NO_2)	18.72	tons/yr
Carbon Monoxide	31.46	tons/yr

Volatile Organic Compounds	2.06	tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period using the equations provided in Condition 27 and shall include startup/shutdown periods, as applicable. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 2, 3, 4, 6, 7, 9, and 27.
(9 VAC 5-80-110 and Condition 17 of 9/21/2017 Permit)

17. **Limitations - Emission Limits (BB2)** – Emissions from the operation of the digester gas flare shall not exceed the limits specified below:

Nitrogen Oxides (as NO_2)	0.7	lbs/hr	3.04	tons/yr
Carbon Monoxide	3.2	lbs/hr	13.8	tons/yr
Sulfur Dioxide	6.3	lbs/hr	27.7	tons/yr
Volatile Organic Compounds	6.8	lbs/hr	29.5	tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 8 and 10.
(9 VAC 5-80-110 and Condition 20 of 9/21/2017 Permit)

18. **Limitations - Visible Emissions Limit (CT1, HRSG 1, HRSG 2)** – Visible emissions from the combustion turbine and each of the heat recovery steam generators shall not exceed 10 percent opacity as determined by 40 CFR 60, Appendix A, Method 9. This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-110 and Condition 21 of 9/21/2017 Permit)

19. **Limitations - Visible Emissions Limit (BB2)** – The digester gas flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.
(9 VAC 5-80-110 and Condition 22 of 9/21/2017 Permit)

20. **Limitations - Process Restriction (CT1)** – The combustion turbine shall be limited to 200 startup and 200 shutdown events per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 23 of 9/21/2017 Permit)

21. **Limitations – Visible Emissions Limits (B1 – B4) -** Visible emissions from the boilers shall not exceed 20 percent except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity.
(9 VAC 5-80-110 and 9 VAC 5-50-80)

22. **Limitations – RICE MACT (EG1) -** You must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in 40 CFR 63 Subpart ZZZZ Tables 1a, 2a, 2c, and 2d apply.
(9 VAC 5-80-110, 9 VAC 5-60-100 and 40 CFR 63.6625(h))

23. **Limitations – RICE MACT (EG1)** – For the emergency generator, you must meet the following requirements:

    a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]

    b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and

    c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

    [1] Sources have the option to utilize an oil analysis program as described in 40 CFR 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of 40 CFR 63 Subpart ZZZZ.
    (9 VAC 5-80-110, 9 VAC 5-60-100, 40 CFR 63.6603(a) and Table 2d of 40 CFR 63 Subpart ZZZZ)

24. **Limitations - Maintenance/Operating Procedures** – At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

    The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance;

b. Maintain an inventory of spare parts;

c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum; and

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

(9 VAC 5-80-110 and Condition 35 of 9/21/2017 Permit)

25. **Monitoring/Recordkeeping – Fuel Monitoring (CT1, HRSG1, HRSG2) -** The sulfur content of the natural gas shall be monitored by the permittee by providing the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel. The document shall specify the requirements set out in Condition 9.
(9 VAC 5-80-110, 40 CFR 60.4365(a) and Condition 12 of 9/21/2017 Permit)

26. **Monitoring - Annual Emissions Equation (CT1)** – Annual emissions from the combustion turbine shall be calculated using the following equations:

a. <u>For NO_x, CO, and VOC, use the following equation</u>:

$$\text{Total}_{\text{Pollutant}} = \frac{(SU \times A) + (SD \times B) + (H \times C) + (TH_{CT} \times EF_{CT} \times HC)}{2000 \frac{lbs}{ton}} \qquad \text{Equation 1}$$

Where:

SU = Number of Start-up Events for the combustion turbine
SD = Number of Shutdown Events for the combustion turbine
H = Number of Hours the combustion turbine was operating in low temperature mode
A, B, C are taken from Attachment A for the corresponding pollutant
TH_{CT} = Throughput of natural gas to the combustion turbine in mmcf
EF_{CT} is taken from Attachment B for the corresponding pollutant and emission unit.
HC = Heat Content of natural gas in MMBtu/mmcf (if available); otherwise assume 1,060 BTU/cf

b. <u>For PM, PM-10, PM-2.5, and SO_2, use the following equation:</u>

$$\text{Total}_{\text{Pollutant}} = \frac{(TH_{CT} \times EF_{CT} \times HC)}{2000 \frac{lbs}{ton}} \qquad \text{Equation 2}$$

Where:

TH_{CT} = Throughput of natural gas to the combustion turbine in mmcf
EF_{CT} is taken from Attachment B for the corresponding pollutant and emission unit
HC = Heat Content of natural gas in MMBtu/mmcf (if available); otherwise assume 1,060 BTU/cf

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. In no event shall the actual emission rates of any pollutant exceed the limits established in Condition 15.
(9 VAC 5-80-110 and Condition 18 of 9/21/2017 Permit)

27. **Monitoring - Annual Emissions Equation (HRSG 1, HRSG 2)** – Annual emissions from the heat recovery steam generators (Ref. HRSG1 and HRSG2) shall be calculated using the following equation:

$$\mathbf{Total}_{Pollutant} = \frac{(TH_{HRSG} \times EF_{HRSG})}{2000 \frac{lbs}{ton}}. \qquad \text{Equation 3}$$

Where:

TH_{HRSG} = Throughput of natural gas to both heat recovery steam generators in mmcf
EF_{HRSG} is taken from Attachment B for the corresponding pollutant and emission unit.

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. In no event shall the actual emission rates of any pollutant exceed the limits established in Condition 16.
(9 VAC 5-80-110 and Condition 19 of 9/21/2017 Permit)

28. **Monitoring - Monitoring Devices (CT1, HRSG 1, HRSG 2)** - The permittee shall install, calibrate, maintain, and operate a flow meter to continuously measure the natural gas input rates to the cogeneration system. The permittee shall record the fuel input rate with a frequency of not less than once per hour as required in Condition 32.i. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each flow meter shall be provided with adequate access for inspection and shall be in operation when the cogeneration system is operating.
(9 VAC 5-80-110 and Condition 29 of 9/21/2017 Permit)

29. **Monitoring - Monitoring Devices (BB2)** - The permittee shall install, calibrate, maintain, and operate a monitoring device to continuously measure the wastewater treatment digester gas input rates to the digester gas flare. The permittee shall record the wastewater treatment gas input rate with a frequency of not less than once per day as a cumulative total for that day (or shorter alternate period). Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall

include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the flare is operating.
(9 VAC 5-80-110)

30. **Monitoring/Testing - Visible Emissions Evaluation (CT1, HRSG 1, HRSG 2, BB2, B1 – B4, EG1)** – Upon request by the DEQ, the permittee shall conduct visible emission evaluations from the combustion turbine, the heat recovery steam generators, the digester gas flare, the boilers or the emergency generator to demonstrate compliance with the visible emission limits contained in this permit. The test shall be conducted while the unit is operating. The details of the tests shall be arranged with the DEQ.
(9 VAC 5-80-110 and Condition 28 of 9/21/2017 Permit)

31. **Recordkeeping - Fuel Monitoring/Recordkeeping (CT1, HRSG 1, HRSG 2)** - The permittee shall record the high heating value (HHV) heat content (Btu/scf) of the natural gas used in the cogeneration system at a minimum of once every month. The value recorded for each period shall be the maximum HHV heat content (Btu/scf) observed for the period.
(9 VAC 5-80-110 and Condition 27 of 9/21/2017 Permit)

32. **Recordkeeping - On Site Records** – The permittee shall maintain records of emissions data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

    a. Monthly and annual throughput of natural gas to the combustion turbine (Ref. CT1) and both heat recovery steam generators (Ref. HRSG1 and HRSG2). Annual throughput shall be calculated as the sum of each consecutive 12-month period.

    b. Daily, monthly and annual throughput of wastewater treatment digester gas to the digester gas flare (Ref. BB2). Annual throughput shall be calculated as the sum of each consecutive 12-month period.

    c. A current, valid purchase contract, tariff sheet or transportation contract for the natural gas, as required by Condition 25.

    d. Monthly and annual emissions calculations for the combustion turbine (Ref. CT1) and heat recovery steam generators (Ref. HRSG1 and HRSG2) using the equations in Conditions 26 and 27, as required by Conditions 15 and 16.

    e. Monthly and annual emissions calculations for the digester gas flare (BB2), as required by Condition 17.

    f. Monthly and annual count of start-up and shutdown events for the combustion turbine (CT1), as required by Condition 20.

g. Date, time, and the hours of duration of the low temperature operating mode for the combustion turbine**.**

h. Natural gas heat content values in accordance with Condition 31.

i. Hourly natural gas throughput for the cogeneration system (CT1, HRSG 1, HRSG 2) recorded hourly as gas consumed during the clock hour (scf/hr).

j. Calibration of the monitoring device for the flow meter as required in Condition 28.

k. Calibration of the monitoring device used to measure biogas input to the flare as required in Condition 29.

l. Records of maintenance, operating procedures, and training as required in Condition 24.

m. Records of bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment as required in Condition 33.

n. Results of all performance tests and visible emission evaluations.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and Condition 30 of 9/21/2017 Permit)

33. **Recordkeeping - Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.
(9 VAC 5-80-110 and Condition 36 of 9/21/2017 Permit)

34. **Recordkeeping – NSPS Subpart Dc (B1 – B4) -** The permittee shall record and maintain records of the amount of each fuel combusted in the boilers (B1 – B4) during each operating day. As an alternative to maintaining such records, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f) to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month. All records required by 40 CFR 60.48c shall be maintained by the permittee for at least two years following the date of such record.
(9 VAC 5-80-110, 40 CFR 60.48c(g)(2) and 40 CFR 60.48c(h))

35. **Testing - Emissions Testing (CT1, BB2, HRSG 1, HRSG 2)** – The combustion turbine, digester gas flare, and heat recovery steam generators shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Sampling ports, safe sampling platforms, and access shall be provided when requested. (9 VAC 5-80-110 and Condition 24 of 9/21/2017 Permit)

36. **Testing - Stack Tests (CT1)** – NO_x performance tests shall be conducted annually (no more than 14 calendar months following the previous performance test) on the combustion turbine in accordance with 40 CFR 60.4400 to demonstrate compliance with the emission limits in Condition 13 and shall include emissions from other units that utilize a common steam header with the combustion turbine. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit contained in the permit, the permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of a subsequent performance test exceed 75 percent of the NO_x emissions limit for the combustion turbine, the permittee must resume annual performance tests. The details of the tests shall be arranged with the DEQ. One copy of the test result shall be submitted to the DEQ and one copy shall be submitted to the EPA at the address in Condition 39 within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-110, 9 VAC 5-50-410, 40 CFR 60.4340, 40 CFR 60.4375(b), 40 CFR 60.4400(a) and (b), and Condition 25 of 9/21/2017 Permit)

37. **Testing - Stack Tests (HRSG 1, HRSG 2)** – NO_x performance tests shall be conducted annually (no more than 14 calendar months following the previous performance test) on each of the heat recovery steam generators while the unit is burning natural gas, in accordance with 40 CFR 60.4400, to demonstrate compliance with the emission limits in Condition 14. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit contained in the permit, the permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of a subsequent performance test exceed 75 percent of the NO_x emissions limit for the heat recovery steam generator, the permittee must resume annual performance tests. The details of the tests shall be arranged with the DEQ. One copy of the test result shall be submitted to the DEQ and one copy shall be submitted to the EPA at the address in Condition 39 within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-110, 9 VAC 5-50-410, 40 CFR 60.4340, 40 CFR 60.4375(b), 40 CFR 60, Subpart KKKK, and Condition 26 of 9/21/2017 Permit)

38. **Testing – NSPS KKKK (CT1) Testing –** Performance testing for SO_2 shall be conducted annually (no more than 14 calendar months following the previous performance test) on the combustion turbine using one of the following methodologies.

    a. If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see 40 CFR 60.17). The fuel analyses of this

section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see 40 CFR 60.17).

b. Measure the SO_2 concentration (in parts per million (ppm)), using EPA Methods 6, 6C, 8, or 20 in appendix A of 40 CFR 60. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19-10-1981-Part 10, "Flue and Exhaust Gas Analyses," manual methods for sulfur dioxide (incorporated by reference, see 40 CFR 60.17) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then use the following equation to calculate the SO_2 emission rate:

$$E = \frac{1.664 \times 10^{-7} * (SO_2)_c * Q_{std}}{P}$$

Where:

E = SO_2 emission rate, in lb/MWh
1.664×10^{-7} = conversion constant, in lb/dscf-ppm
$(SO_2)_c$ = average SO_2 concentration for the run, in ppm
Q_{std} = stack gas volumetric flow rate, in dscf/hr
P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to 40 CFR 60.4350(f)(2)

c. Measure the SO_2 and diluent gas concentrations, using either EPA Methods 6, 6C, or 8 and 3A, or 20 in appendix A of 40 CFR 60. In addition, you may use the manual methods for sulfur dioxide ASME PTC 19-10-1981-Part 10 (incorporated by reference, see 40 CFR 60.17). Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of 40 CFR 60 to calculate the SO_2 emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in 40 CFR 60.4350(f) to calculate the SO_2 emission rate in lb/MWh.

(9 VAC 5-80-110, 9 VAC 5-50-410 and 40 CFR 60.4415(a))

39. **Reporting - Reports (CT1, HRSG1, HRSG2)** – The permittee shall submit a written report of the results of each annual performance test performed in accordance with 40 CFR 60.4340(a) and Conditions 36 and 37 to the DEQ by the 60th day following the completion of the performance test. One copy of the report shall be submitted to the U.S. Environmental Protection Agency at the address specified below:

    Associate Director
    Office of Air Enforcement (3AP20)
    U.S. Environmental Protection Agency
    Region III
    1650 Arch Street
    Philadelphia, PA 19103-2029

    (9 VAC 5-80-110, 40 CFR 60.4375(b), and Condition 31 of 9/21/2017 Permit)

40. **Notifications** – The permittee shall furnish written notification to the DEQ of:

    a. The anticipated date of performance tests for the combustion turbine postmarked at least 30 days prior to such date.

    b. The anticipated date of performance tests for the heat recovery steam generators postmarked at least 30 days prior to such date.

    Copies of the written notifications are to be sent to the EPA at the address referenced in Condition 39.
    (9 VAC 5-80-110 and Condition 32 of 9/21/2017 Permit)

Process Equipment Requirements (Dairy Pasteurization/Processing Area (PR1))

41. **Limitations - Emission Controls (PR1)** – VOC emissions from the dairy pasteurization/processing area shall be controlled by proper operation and maintenance in accordance with the manufacturer's operating instructions, at a minimum.
    (9 VAC5-80-110 and Condition 1 of 3/28/2017 Permit)

42. **Limitations - Throughput (PR1)** – The throughput of VOCs to the dairy pasteurization/processing area shall not exceed 5,265 tons/year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
    (9 VAC 5-80-110 and Condition 2 of 3/28/2017 Permit)

43. **Limitations - Emission Limits (PR1)** – Emissions from the operation of the dairy pasteurization/processing area shall not exceed the limits specified below:

Volatile Organic Compounds	3.7	lbs/hr	16.2	tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition 42.
(9 VAC 5-80-110 and Condition 3 of 3/28/2017 Permit)

44. **Limitations – Visible Emissions Limit (PR1)** - Visible emissions from the dairy pasteurization/processing area shall not exceed 20 percent except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity.
(9 VAC 5-80-110 and 9 VAC 5-50-80)

45. **Limitations - Maintenance/Operating Procedures** – At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

    The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

    a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance;

    b. Maintain an inventory of spare parts;

    c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum; and

    d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

    (9 VAC 5-80-110 and Condition 7 of 3/28/2017 Permit)

46. **Monitoring/Recordkeeping - On Site Records (PR1)** – The permittee shall maintain records of emissions data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

a. Monthly and annual throughput of VOCs to the dairy pasteurization/processing area (PR1), calculated monthly as required by Condition 42.

b. Monthly and annual emissions of VOCs from the dairy pasteurization/processing area (PR1), calculated monthly as required by Condition 43.

c. Material Safety Data Sheets or other vendor information as approved by DEQ showing VOC content for each product additive used.

d. Records of maintenance, operating procedures, and training as required in Condition 45.

e. Records of bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment as required in Condition 47.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and Condition 4 of 3/28/2017)

47. **Recordkeeping - Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.
(9 VAC 5-80-110 and Condition 8 of 3/28/2017 Permit)

Insignificant Emission Units

48. **Insignificant Emission Units** - The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation[1] (9VAC_)	Pollutant(s) Emitted (9VAC5-80-720 B.)	Rated Capacity (9VAC5-80-720 C.)
WH1	Gas-Fired Turbopower 99 Water Heater	5-80-720 C	N/A	0.5 MMBtu/hr
WH2	Gas-Fired Turbopower 99 Water Heater	5-80-720 C	N/A	0.5 MMBtu/hr
WH3	Gas-Fired Turbopower 99 Water Heater	5-80-720 C	N/A	2 MMBtu/hr

Emission Unit No.	Emission Unit Description	Citation[1] (9VAC_)	Pollutant(s) Emitted (9VAC5-80-720 B.)	Rated Capacity (9VAC5-80-720 C.)
WH4	Gas-Fired Turbopower 99 Water Heater	5-80-720 C	N/A	2 MMBtu/hr
EH1	Evergreen Bottle Filler	5-80-720 C	N/A	0.15 MMBtu/hr
EH3	Evergreen Bottle Filler	5-80-720 C	N/A	0.15 MMBtu/hr
MAU1	Weather-rite Air Handling Unit	5-80-720 C	N/A	2.83 MMBtu/hr
MAU2	Weather-rite Air Handling Unit	5-80-720 C	N/A	0.22 MMBtu/hr
MAU3	York Air Handling Unit	5-80-720 C	N/A	0.81 MMBtu/hr
GUH1	Air Heater	5-80-720 C	N/A	0.4 MMBtu/hr
GUH2	Air Heater	5-80-720 C	N/A	0.4 MMBtu/hr
GUH3	Air Heater	5-80-720 C	N/A	0.15 MMBtu/hr
GUH6	Air Heater	5-80-720 C	N/A	0.4 MMBtu/hr
GUH7	Air Heater	5-80-720 C	N/A	0.4 MMBtu/hr
GUH8	Air Heater	5-80-720 C	N/A	0.4 MMBtu/hr
GUH9	Air Heater	5-80-720 C	N/A	0.4 MMBtu/hr
GUH10	Air Heater	5-80-720 C	N/A	0.4 MMBtu/hr
GUH11	Air Heater	5-80-720 C	N/A	0.4 MMBtu/hr
DWH1	Air Heater	5-80-720 C	N/A	2.18 MMBtu/hr
Corbett Indirect	Air Heater	5-80-720 C	N/A	0.6 MMBtu/hr
Corbett Direct	Air Heater	5-80-720 C	N/A	0.15 MMBtu/hr
Unit Heaters	Unit Heaters (15 total)	5-80-720 C	N/A	8.62 MMBtu/hr combined
DP1	Domino Printers	5-80-720 B	VOC	N/A
IP1	Imaje Printers	5-80-720 B	VOC	N/A
MP1	Marsh Printers Diagraph Printers	5-80-720 B	VOC	N/A
PW1	Safety Kleen Parts Washer – water-based	5-80-720 A	N/A	N/A
AST	2200-gal Diesel Above-ground Storage Tank	5-80-720 B	VOC	N/A
CT1 – CT8	Cooling Towers	5-80-720 B	PM	N/A
GR1	Trimmings Grinder	5-80-720 B	PM	N/A
AWH_GUH1-38	180 Aseptic Warehouse Air Heaters	5-80-720 C	N/A	9.5 MMBtu/hr combined
AWH_AHU_1	180 Aseptic Warehouse Air Handling Unit	5-80-720 C	N/A	0.12 MMBtu/hr
AWH_AHU_2	180 Aseptic Warehouse Air Handling Unit	5-80-720 C	N/A	0.12 MMBtu/hr

Emission Unit No.	Emission Unit Description	Citation[1] (9VAC_)	Pollutant(s) Emitted (9VAC5-80-720 B.)	Rated Capacity (9VAC5-80-720 C.)
AWH_AHU_3	180 Aseptic Warehouse Air Handling Unit	5-80-720 C	N/A	0.4 MMBtu/hr
AWH_AHU_4	180 Aseptic Warehouse Air Handling Unit	5-80-720 C	N/A	0.4 MMBtu/hr

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Permit Shield & Inapplicable Requirements

49. **Permit Shield & Inapplicable Requirements** - Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Name of Regulation	Reason for Inapplicability
40 CFR 60 Subpart Dc	Standards of Performance for Industrial, Commercial, Institutional Steam Generating Units	The HRSGs are affected facilities associated with a stationary combustion turbine that meets the applicability requirements of Subpart KKKK and are specifically not subject to this Subpart pursuant to Section 60.40c(e). Subpart Dc is applicable to B1 – B4.
40 CR 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Hood's emergency generator is a spark ignition engine, not a compression ignition engine, so Subpart IIII does not apply.
40 CFR 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	For emergency stationary spark ignition internal combustion engines > 19 kW such as EG1, the regulation applies to units constructed after January 1, 2009 (see 40 CFR 60.4230(a)(4)(iv)). The Kohler emergency generator (EG1) was manufactured prior to 2008.

Citation	Name of Regulation	Reason for Inapplicability
40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	CT1 does not meet the applicability criteria in 60.5509(a)(1) and (2), as its baseload rating is </= 250 MMBtu/hr and it generates < 25 MW.
40 CFR Part 63 Subpart YYYY	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	This regulation applies to stationary combustion turbines at major sources of HAP. HP Hood is not a Major Source of HAP.
40 CFR Part 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers	This regulation applies to boilers located at major sources of HAP. HP Hood is not a major source of HAP.
40 CFR Part 63 Subpart JJJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	These boilers meet the definition of "gas-fired boiler" which are specifically not subject to this Subpart pursuant to Section 63.11195(e)
40 CFR Part 64	Compliance Assurance Monitoring	This regulation applies a major source for which a Title V permit is required. To be applicable to CAM, the unit must be subject to an emissions limitation or standard, use a control device to achieve compliance with a federally enforceable limit or standard, and have potential pre-control or post-control emissions of at least 100% of the major source amount. BB1 and BB2 are used to control H2S and CH4, neither of which is a criteria pollutant, therefore they are not subject to CAM.
40 CFR 98	Greenhouse Gas (GHG) Reporting	Requirements in the GHG Reporting Rule in 40 CFR Part 98 are currently not included in the definition of "applicable requirement" in 40 CFR 70.2 and 71.2.
9VAC5 Chapter 140 Part I	NOx Budget Program for Non-Electric Generating Units	Hood's units do not meet the applicability criteria in 9VAC5-140-40 (Hood's CT has a generator capacity of 15 MW, below the 25 MWe applicability threshold in 9VAC5-140-40(1)(c); no units are >250 MMBtu/hr).

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean

Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-140)

General Conditions

50. **General Conditions - Federal Enforceability** - All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-110)

51. **General Conditions - Permit Expiration** - This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

52. **General Conditions - Permit Expiration** - The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

53. **General Conditions - Permit Expiration** - If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

54. **General Conditions - Permit Expiration** - No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

55. **General Conditions - Permit Expiration** - If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

56. **General Conditions - Permit Expiration** - The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

57. **General Conditions - Recordkeeping and Reporting** - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

    a. The date, place as defined in the permit, and time of sampling or measurements;

    b. The date(s) analyses were performed;

    c. The company or entity that performed the analyses;

    d. The analytical techniques or methods used;

    e. The results of such analyses; and

    f. The operating conditions existing at the time of sampling or measurement.

    (9 VAC 5-80-110)

58. **General Conditions - Recordkeeping and Reporting** - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9 VAC 5-80-110)

59. **General Conditions - Recordkeeping and Reporting** - The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31; and

b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:

i. Exceedance of emissions limitations or operational restrictions;

ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

(9 VAC 5-80-110)

60. **General Conditions - Annual Compliance Certification -** Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

a. The time period included in the certification. The time period to be addressed is January 1 to December 31;

b. The identification of each term or condition of the permit that is the basis of the certification;

c. The compliance status;

d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;

e. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;

f. Such other facts as the permit may require to determine the compliance status of the source; and

g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3_APD_Permits@epa.gov

(9 VAC 5-80-110)

61. **General Conditions - Permit Deviation Reporting** - The permittee shall notify the Valley Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9VAC5-40-50 C or 9VAC5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9VAC5-40-50 C or 9VAC5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to Condition 59 of this permit.
(9 VAC 5-80-110 F.2)

62. **General Conditions - Failure/Malfunction Reporting** - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, no later than four daytime business hours after the malfunction is discovered, notify the Valley Regional Office of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C or 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 or 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Valley Regional Office.
(9 VAC 5-80-110 and 9 VAC 5-20-180)

63. **General Conditions - Failure/Malfunction Reporting** - The emission units that have continuous monitors subject to 9 VAC 5-40-50 C or 9 VAC 5-50-50 C are not subject to the 14-day written notification.
(9 VAC 5-20-180 and 9 VAC 5-50-50)

64. **General Conditions - Failure/Malfunction Reporting** - The emission units subject to the reporting and the procedure requirements of 9 VAC 5-40-50 C or the procedures of 9 VAC 5-50-50 C are: Cogeneration System, comprised of units CT1, HRSG1 and HRSG2. (9 VAC 5-80-110, 9 VAC 5-20-180 C and 9 VAC 5-50-50)

65. **General Conditions - Failure/Malfunction Reporting** - Each owner required to install a continuous monitoring system (CMS) or monitoring device subject to 9 VAC 5-40-41 or 9 VAC 5-50-410 shall submit a written report of excess emissions (as defined in the applicable subpart in 9 VAC 5-50-410) and either a monitoring systems performance report or a summary report form, or both, to the board semiannually. All semi-annual reports shall be postmarked by the 30th day following the end of each calendar semi-annual period (June 30th and January 30th). All reports shall include the following information:

    a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9 VAC 5-40-41 B.6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

    b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;

    c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

    d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

    All malfunctions of emission units not subject to 9 VAC 5-40-50 C or 9 VAC 5-50-50 C require written reports within 14 days of the discovery of the malfunction.
    (9 VAC 5-80-110, 9 VAC 5-20-180 C and 9 VAC 5-50-50)

66. **General Conditions - Severability** - The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
    (9 VAC 5-80-110)

67. **General Conditions - Duty to Comply** - The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9 VAC 5-80-110)

68. **General Conditions - Need to Halt or Reduce Activity not a Defense** - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110)

69. **General Conditions - Modification** - A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-110, 9 VAC 5-80-190 and 9 VAC 5-80-260)

70. **General Conditions - Property Rights** - The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110)

71. **General Conditions - Duty to Submit Information** - The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-110)

72. **General Conditions - Duty to Submit Information** - Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110)

73. **General Conditions - Duty to Pay Permit Fees** - The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350 in addition to an annual permit maintenance fee consistent with the requirements of 9 VAC 5-80-2310 through 9 VAC 5-80-2350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. The amount of the annual permit

maintenance fee shall be the largest applicable base permit maintenance fee amount from Table 8-11A in 9 VAC 5-80-2340, adjusted annually by the change in the Consumer Price Index.
(9 VAC 5-80-110, 9 VAC 5-80-340 and 9 VAC 5-80-2340)

74. **General Conditions - Fugitive Dust Emission Standards** - During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

    a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

    b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

    c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;

    d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

    e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

    (9 VAC 5-50-90 and 9 VAC 5-80-110)

75. **General Conditions - Startup, Shutdown, and Malfunction** - At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
    (9 VAC 5-50-20 E and 9 VAC 5-80-110)

76. **General Conditions - Alternative Operating Scenarios** - Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario

under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.
(9 VAC 5-80-110)

77. **General Conditions - Inspection and Entry Requirements** - The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

    a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

    b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

    d. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

    (9 VAC 5-80-110)

78. **General Conditions - Reopening For Cause** - The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F. The conditions for reopening a permit are as follows:

    a. The permit shall be reopened if the Board or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

    b. The permit shall be reopened if the Administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

    c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

    (9 VAC 5-80-110)

79. **General Conditions - Permit Availability** - Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-110 and 9 VAC 5-80-150)

80. **General Conditions - Transfer of Permits** - No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-110 and 9 VAC 5-80-160)

81. **General Conditions - Transfer of Permits** - In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-110 and 9 VAC 5-80-160)

82. **General Conditions - Transfer of Permits** - In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-110 and 9 VAC 5-80-160)

83. **General Conditions - Permit Revocation or Termination for Cause** - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe, any permit for any grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-110, 9 VAC 5-80-190 C and 9 VAC 5-80-260)

84. **General Conditions - Duty to Supplement or Correct Application** - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-110 and 9 VAC 5-80-80 E)

85. **General Conditions - Stratospheric Ozone Protection** - If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(9 VAC 5-80-110 and 40 CFR Part 82)

86. **General Conditions - Asbestos Requirements** - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos, as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9 VAC 5-60-70 and 9 VAC 5-80-110)

87. **General Conditions - Accidental Release Prevention** - If the permittee has more, or will have more, than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(9 VAC 5-80-110 and 40 CFR Part 68)

88. **General Conditions - Changes to Permits for Emissions Trading** - No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110)

89. **General Conditions - Emissions Trading** - Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

    a. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.

    b. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

    c. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

    (9 VAC 5-80-110)

State-Only Enforceable Requirements

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed permits by EPA and draft permits by affected states.

90. **SOE Limitations - Odor Control (PR1)** – The permittee shall not cause or permit any odorous emissions to be discharged into the atmosphere from the permittee's property which causes an odor objectionable to individuals of ordinary sensibility.
(9 VAC 5-80-110 and Condition 13 of 3/28/2017 Permit)

91. **SOE Limitations - Emission Controls (CT1)** –Formaldehyde emissions from the combustion turbine shall be controlled by the use of good combustion practices and proper operation and maintenance in accordance with the manufacturer's operating instructions, at a minimum.
(9 VAC 5-80-110 and Condition 41 of 9/21/2017)

92. **SOE Limitations - Toxic Emission Limits (CT1)** – Formaldehyde emissions from the operation of the combustion turbine shall not exceed the limits specified below:

Formaldehyde (CAS 50-00-00)	0.42	lbs/hr	1.82	tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance with these emission limits may be determined as stated in Condition 91.
(9 VAC 5-80-110 and Condition 42 of 9/21/2017 Permit)

93. **SOE On Site Records (CT1)** – The permittee shall maintain records of emissions data and operating parameters as necessary to demonstrate compliance with this section of the permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to monthly and annual emissions of formaldehyde from the combustion turbine, calculated monthly as required by Condition 92. These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and Condition 43 of 9/21/2017 Permit)

SHORT-TERM EMISSIONS IN NON-STANDARD OPERATING MODES

Operational Mode	Pollutant Emission Rate		
	NO_x	CO	VOC
(A) Start-up (lb/event)	2.1	195.6	2.2
(B) Shutdown (lb/event)	2.4	210.0	2.4
(C) Low Temperature Mode (< 0°F) (lbs/hr) [1]	76.9	58.5	2.22

[1] Low temperature operating mode is defined as operation below 0°F and greater than 50% load

EMISSION FACTORS

Pollutant	Combustion Turbine (Ref. CT1) (EF_{CT})
	lb / MM BTU
CO	0.06
NO_x	As determined by most recent DEQ-approved stack test for CT1
VOC	0.007
PM	0.0019
PM-10/PM-2.5	0.018
SO_2	0.0056

Pollutant	Heat Recovery Steam Generators (Ref. HRSG1 and HRSG2) (EF_{HRSG})
	lb / mmcf
CO	84
NO_x	As determined by most recent DEQ-approved stack test for each HRSG
VOC	5.5
PM	1.9
PM-10/PM-2.5	7.6
SO_2	6.0